

R E M A R K S

Claims 1-8 and 11 are pending and stand ready for further action on the merits. Claim 1 has been amended for clarity. No new matter has been added by way of the above amendment.

*Imai et al - US Patent 5,216,074*

Claims 1-6 remain rejected and new claim 11 is newly rejected under 35 U.S.C. §102(b) as anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over Imai et al. Applicants respectfully traverse the rejection.

The present invention is drawn to a thermoplastic elastomer composition comprising the following components (A), (B) and (C):

(A) 100 parts by weight of a thermoplastic polyester elastomer;

(B) 3 to 100 parts by weight of a modified olefin resin having an epoxy group or a derivative group thereof in its molecule; and

(C) 10 to 900 parts by weight of a rubbery elastomer selected from the group consisting of an olefin-based thermoplastic elastomers and styrene-based thermoplastic elastomers; wherein the component (C) is not vulcanized; wherein said olefin-based thermoplastic elastomer component (C) is at least one selected from the group consisting of a copolymer consisting essentially of

ethylene and propylene, ethylene-butene copolymer and ethylene-octene copolymer; and wherein said styrene-based thermoplastic elastomer component (C) is at least one selected from the group consisting of styrene-butadiene block copolymer, styrene-isoprene block copolymer, hydrogenated styrene-butadiene block copolymer, and hydrogenated styrene-isoprene block copolymer.

This particular set of components gives the composition advantageous properties which allow it to be used as a material for various molding products having excellent scratch resistance on the surface, flexibility, heat resistance, oil resistance, properties at low temperatures, weatherability, strength and fabrication properties.

We now turn to the disclosure of Imai et al.

Imai et al. teach a thermoplastic elastomer composition comprising component (i) a hydrogenated diene block copolymer in combination with component (ii) at least one of a thermoplastic resin or a rubbery polymer. The Examiner has taken the position that the possible constituents of component (ii) overlap with inventive Components (A), (B) and (C) thereby making the presently claimed invention either anticipated or rendered obvious.

Since inventive Component (C) has two embodiments, i.e., olefin-based thermoplastic elastomers and styrene-based thermoplastic elastomers, we will treat these separately.

Olefin-Based Thermoplastic Elastomers:

The Examiner relies upon the generic teachings of Elastomer Composition (VIII) as disclosed in column 19, line 6 to column 20, line 26. Also, the Examiner relies upon the specific composition of Example 30 as described in Table 6 of Imai et al. In example 30, the Examiner is equating Modiper A4200 with inventive component (B). Also, the Examiner is equating TPEE with the inventive component (A) and the Examiner is equating EPDM with the inventive component (C).

The Examiner maintains that the EPDM polymer of Imai et al. is encompassed by inventive component (C). In order to clarify that the inventive claims do not encompass EPDM, Applicants have herein amended claim 1 by replacing the "ethylene-propylene copolymer" with "a copolymer consisting essentially of ethylene and propylene."

According to MPEP §2111.03, the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps and those that do not materially affect the basic and novel characteristics of the claimed invention. Applicants respectfully submit that butadiene portion of EPDM has a deleterious effect on the properties of the ethylene-propylene copolymer when used in thermoplastic elastomer compositions, such as presently claimed, and as such, EPDM is excluded from the inventive composition.

In describing the requirements for rejection of a claim by anticipation, the Manual of Patent Examining Procedure (Section 2131) states:

[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference (ref. omitted). The identical invention must be shown in as complete detail as is contained in the... claim (ref. omitted).

In view of the above amendment excluding EPDM from component (C), Applicants respectfully submit that none of the exemplified embodiments of the Imai et al. reference are encompassed by the inventive claims, and as such, Imai et al. does not anticipate the embodiment of the claims wherein Component (C) is an olefin-based thermoplastic elastomer under 35 U.S.C. 102(b).

Furthermore, Applicants respectfully submit that the skilled artisan would not be motivated to modify the composition of Example 30 of Imai et al. by replacing EPDM with the specific rubbery polymers now defined as inventive component (C).

Applicants respectfully submit that in similar factual situations, the courts have not found the claimed invention obvious. Such a case is In re Baird, 29 USPQ2d 1550 (CAFC, 1994).

In Baird, there was an application claim for a flash fusible toner prepared using a bisphenol A. The Examiner rejected the application claim based upon a reference which taught a genus

containing an estimated 100 million different diphenols simply because the reference genus encompassed bisphenol A. The Federal Circuit thought otherwise and overturned the Examiner's rejection.

Important facts which led to the court's conclusion were that the reference cited by the Examiner taught a genus containing a large number of variables and only one of which was bisphenol A. There was nothing in the disclosure of the reference to suggest that one would select the specific variables necessary to obtain bisphenol A. In fact, the specific examples appeared to teach away from the relatively simple formula of bisphenol A, since the specific examples had more complex formulas. The courts reasoned that while the reference may suggest certain complex bisphenol A derivatives, it did not describe or suggest bisphenol A and therefore did not *motivate* the selection of bisphenol A.

In the instant case, the facts are similar. The generically disclosed elastomer composition of Imai et al. encompasses hundreds of thousands of possible combinations whereas inventive independent claim 1 lists as the rubbery component only a copolymer consisting of essentially of ethylene and propylene, ethylene-butene copolymer and/or ethylene-octene copolymer; and/or styrene-butadiene block copolymer, styrene-isoprene block copolymer, hydrogenated styrene-butadiene block copolymer, and/or hydrogenated styrene-isoprene block copolymer.

Also, the specifically disclosed composition of Example 30 of Imai et al., contains EPDM which is a terpolymer having a diene block. This is in distinction with the possible olefin polymers of inventive Component (C) which has been amended to exclude EPDM.

A reference must be considered not only for what it expressly teaches but also for what it fairly suggests. In re Burckel, 201 USPQ 67, 70 (CCPA 1979). Given the vast number of combinations encompassed by the generic formula of the thermoplastic composition of Imai et al., and the fact that specifically disclosed Example 30 of Imai et al. contains a rubbery component which is structurally different in many respects from the inventive rubbery component, it is fair to conclude that Imai et al. do not fairly suggest the selection of Components (A), (B) and (C) as encompassed by instant claim 1.

Applicants respectfully submit that Imai et al. fail to fairly suggest modifying the EPDM component of Example 30 to include the inventive olefin-based thermoplastic elastomer component (C) which is at least one selected from the group consisting of a copolymer consisting essentially of ethylene and propylene, ethylene-butene copolymer and ethylene-octene copolymer. Accordingly, a *prima facie* case of obviousness cannot be said to exist with respect to the embodiment of the inventive

claims wherein Component (C) is an olefin-based thermoplastic elastomer under 35 U.S.C. §103(a).

Styrene-Based Thermoplastic Elastomers:

With respect to the styrene based elastomers, the Examiner relies on the teachings at col. 3, lines 40-57 of Imai et al. In fact, it is disclosed therein that Block D is a polybutadiene or an alkenyl aromatic compound-butadiene copolymer (col. 3, lines 40-41) and that the alkenyl aromatic compound used in Block D is particularly preferably styrene or  $\alpha$ -methylstyrene (col. 3, lines 45-50). As is clear therefrom, this description does not teach that Block D is particularly preferably a styrene block, rather merely reciting a partial structure of possible Block D.

Throughout the disclosure in the Imai et al. reference, Imai "teaches away" from the use of polystyrene-polybutadiene-polystyrene block copolymer and its hydrogenated product (SEBS). Imai's block copolymer consisting of blocks (C) and (D) is described as being distinguished from polystyrene-polybutadiene-polystyrene block copolymer and its hydrogenated product (SEBS). See, particularly, col. 1, lines 30 to 51 (where the problems of SEBS are mentioned) and columns 25 to 36 (where SEBS is used only in some Comparative Examples, whereas the Invention

Examples use the specific block copolymer consisting of blocks (C) and (D)).

A reference which leads one of ordinary skill in the art away from the claimed invention cannot render it unpatentably obvious. *Dow Chem. Co. v. American Cyanamid Co.* 816 F2d 617, (CAFC 1987). In determining the scope and content of the prior art, and determining whether the prior art suggested the claimed invention, the references "must be read as a whole and consideration must be given where the references diverge and teach away from the claimed invention." *Akzo N.V. v. United States Int'l Trade Comm'n*, 1 USPQ2d 1241, 1246 (Fed. Cir. 1986); *In re Fine*, 5 USPQ2d 1596, 1598-99 (Fed. Cir. 1988). Known disadvantages in old devices which would naturally discourage the search for new inventions may be taken into account in determining obviousness. *United States v. Adams*, 383, U.S. 39, 52 (1966).

Thus, it cannot be considered that the Imai et al. reference discloses or fairly suggests the use of inventive styrene-based thermoplastic elastomer component (C) which is at least one selected from the group consisting of styrene-butadiene block copolymer, styrene-isoprene block copolymer, hydrogenated styrene-butadiene block copolymer, and hydrogenated styrene-isoprene block copolymer. Accordingly, a *prima facie*



case of obviousness cannot be said to exist with respect to the embodiment of the inventive claims wherein Component (C) is an styrene-based thermoplastic elastomer under 35 U.S.C. §103(a).

In view of the foregoing, withdrawal of the rejection is respectfully requested.

***Allowable Subject Matter***

Applicants note with appreciation that the Examiner has indicated that claims 7 and 8 contain allowable subject matter.

In view of the above amendments and comments, Applicants respectfully submit that the claims are in condition for allowance. However, should the Examiner find to the contrary, Applicants respectfully request that the Examiner enter this Amendment into the official file for placing the claims into better form for appeal.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee of \$110.00 is attached hereto.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully

requested to contact Garth M. Dahlen, Ph.D., Esq. (Reg. No. 43,575) at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.


Respectfully submitted,

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